

~~New Patent Claims~~~~What is claimed is:~~

1. A radio receiver device having at least two variably tunable tuning stages (2, 3), for two receiving ranges, that are connected to a receiving antenna (1) and that can be switched effective separately, having a changeover switch (4) for the optional connection of one of the tuning stages (2, 3) with a frequency converter stage (5) having a mixing oscillator (6) for the conversion of received high-frequency signals into a defined intermediate frequency, the mixing oscillator (6) being able to be changed over in its tuning range, using a changeover device, to one of the tuning stages (2, 3) in such a way that for a first receiving range of the first tuning unit (2) its oscillation frequency can be set above the frequency to be received by the quantity of the intermediate frequency, and for a second receiving range of the second tuning unit (3) its oscillation frequency can be set below the frequency to be received by the quantity of the intermediate frequency.
2. The radio receiver as recited in Claim 1, characterized in that the mixing oscillator (6) is fashioned having an oscillator coil (7) that is provided with a tap (73), and in that the mixing oscillator (6) can be changed over through a switching effective or switching ineffective (74) of the tap (73).
3. The radio receiver as recited in Claim 1 or 2, characterized in that the receiving antenna (1) can be switched effective, respectively via a coupling capacitor (21, 31) and a switch (22, 32), only for the tuning stage (2, 3) connected with the frequency converter stage (5) via the changeover switch (4).
4. The radio receiver as recited in one of the preceding claims, characterized in that the tuning stages (2, 3) each have a first tunable tuning circuit (23, 33), an amplifier stage (24, 34), and a second tunable tuning circuit (25, 35).
5. The radio receiver as recited in one of the preceding claims, characterized in that the frequency converter stage (5) has a mixing stage (51), an oscillator amplifier stage (52), an isolating amplifier (55), a divider (54) that can be programmed via a data bus, and a PLL stage (53).

What is claimed is:

1. A radio receiver having a tuning stage (2, 3) that is connected to a receiving antenna (1) and that is tunable using a tuning signal ( $V_T$ ), a frequency conversion stage (5) having a mixing oscillator (6) that can be controlled by the tuning signal ( $V_T$ ) for converting the received high-frequency signals into a defined intermediate frequency (ZF), and having additional processing stages for the formation of an audible low-frequency signal, characterized in that at least two parallel tuning units (2, 3) are connected to the receiving antenna (1), which units can be switched effective separately and whose outputs are connected with the common frequency converter stage (5) via a changeover switch (4), and in that the mixing oscillator (6) is constructed so as to be able to be changed over in its tuning range, using a changeover to one of the tuning units (2).
2. The radio receiver device as recited in Claim 1, characterized in that the mixing oscillator is fashioned having an oscillator coil (7) that is provided with a tap (73), and in that the mixing oscillator (6) can be changed over through a switching effective or switching ineffective of the tap (73).
3. The radio receiver device as recited in Claim 1 or 2, characterized in that the receiving antenna (1) can be switched effective, respectively via a coupling capacitor (21, 31) and a switch (22, 32), only for the tuning unit (2, 3) connected with the frequency converter stage (5) via the changeover switch (4).
4. The radio receiver device as recited in one of Claims 1 through 3, characterized in that the mixing oscillator (6) is designed so as to be able to be changed over, such that for a receiving range of a first tuning unit (2) its oscillation frequency can be set above the frequency to be received by the quantity of the intermediate frequency, and for a receive range of a second tuning unit (3) its oscillation frequency can be set below the frequency to be received by the quantity of the intermediate frequency.

5. The radio receiver as recited in one of Claims 1 through 4, characterized by two tuning units (2, 3) and by the possibility of changing over the mixing oscillator (6).
6. The radio receiver as recited in one of Claims 1 through 5, characterized in that the receiving units (2, 3) each have a first tunable tuning circuit (23, 33), an amplifier stage (24, 34), and a second tunable tuning circuit (25, 35).
7. The radio receiver as recited in one of Claims 1 through 6, characterized in that the frequency converter stage (85) has a mixing stage (51), an oscillator amplifier stage (52), an isolating amplifier (53), a divider (54) that can be programmed via a data bus, and a PLL stage (59).